

Patent
Serial No. 10/522,298

Amendment in Reply to Office Action of April 19, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of controlling In a disc drive apparatus of a type comprising:
 - ~~_____ radially displaceable scan means, comprising,~~
 - a sledge radially displaceable with respect to an apparatus frame; and
 - a platform radially displaceable with respect to said sledge;
 - thea method of controlling comprising the acts of: for
detecting a substantial deceleration or acceleration or
stop of the sledge when moving radially;
 - the method of detecting comprising anthe actstep of
detecting a radial displacement of said platform with respect to
said sledge.

2. (Currently Amended) A method according to claim 1, ~~for use in a disc drive apparatus comprising an electromagnetic device in an actuator for displacing said platform with respect to said sledge, wherein the method of detecting comprises the step an~~ act of detecting a back-EMF in said an electromagnetic device in an actuator for displacing said platform with respect to said sledge.

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3. (Currently Amended) A method according to claim 1, for ~~use in a disc drive apparatus comprising an optical system for scanning a disc, the optical system defining an optical path of which at least a part is substantially fixed with respect to the sledge and comprising an optical element which is fixed with respect to the platform;~~

~~the method comprising the step~~ an act of detecting an optical read signal (S_R) and deriving therefrom ~~from the optical read signal~~ an X-displacement signal (S_{XD}).

4. (Currently Amended) A method according to claim 1, wherein ~~it is determined that~~ detecting the substantial deceleration or acceleration or stop of the said sledge occurs ~~when a detected comprises detecting a radial displacement of said platform with respect to said sledge exceeds a predetermined decision threshold~~ (Th).

5. (Currently Amended) A method according to claim 2, wherein ~~an actuator is activated such as to counteract a radial displacement of said platform with respect to said sledge;~~ ~~the method comprising the step~~ an act of detecting an actuator control signal activated to counteract the radial displacement of said platform with respect to said sledge (S_{CP}).

6. (Currently Amended) A method according to claim 5, wherein ~~it is determined that~~ detecting a substantial deceleration or acceleration or stop of said the sledge occurs ~~when the detected~~

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comprises an act of detecting an actuator control signal (S_{cs})
exceeds a predetermined decision threshold (Th) .

7. (Currently Amended) A method for initializing ~~at~~ the radial position of an optical lens in a start-up phase of a disc drive apparatus, the method comprising ~~the steps~~ acts of:

- exerting a force (F) on said sledge;
- detecting ~~thea~~ substantial deceleration or stop of the sledge using ~~thea~~ method of detecting according to claim 1; and
- stopping said force (F) as soon as a substantial radial displacement of said platform with respect to said sledge is detected.

8. (Currently Amended) Disc drive apparatus, comprising:

- a radially displaceable scan means, comprising:
 - a sledge radially displaceable with respect to an apparatus frame;
 - a platform radially displaceable with respect to said sledge;
- said apparatus further comprising:
- sledge stop detection means for detecting ~~that said the~~ moving sledge comes-coming to a standstillstop;
 - said sledge stop detection means comprising radial displacement detection means for detecting a radial displacement of said platform with respect to said sledge.

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9. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 8, further comprising:

- an electro-motive platform actuator ~~for displacing~~ configured to displace said platform with respect to said sledge;

wherein said radial displacement detection means are designed to detect a back-EMF in said electro-motive platform actuator.

10. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 8, further comprising:

- an optical system for scanning a disc, the optical system defining an optical path of which at least a part is substantially fixed with respect to ~~said~~the sledge and comprising an optical element which is fixed with respect to ~~said~~the platform;

wherein said radial displacement detection means are designed to detect an optical read signal (S_R) and to derive ~~therefrom~~ from the optical read signal an X-displacement signal (S_{XD}).

11. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 8, wherein said radial displacement detection means are designed to determine that a substantial deceleration or acceleration or stop of the sledge occurs when a detected radial displacement of said platform with respect to said sledge exceeds a predetermined decision threshold ~~(T_d)~~.

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12. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 8, further comprising:

- a controllable platform actuator associated with said sledge and said platform ~~for configured to radially displacing~~ displace said platform with respect to said sledge in response to an actuator control signal;

- a control unit ~~generating configured to generate a~~ platform control signal ~~(S_{CP})~~ for said platform actuator ~~such as to~~ counteract a radial displacement of said platform with respect to said sledge;

wherein said radial displacement detection means are designed to detect said actuator control signal ~~(S_{CP})~~.

13. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 12, wherein said radial displacement detection means are designed to determine that a substantial deceleration or acceleration or stop of ~~said~~the sledge occurs when a detected actuator control signal ~~(S_{CP})~~ exceeds a predetermined decision threshold ~~(Th)~~.

14. (Currently Amended) Apparatus according to claim 8, further comprising:

- a controllable sledge actuator ~~for moving~~configured to move ~~said~~the sledge radially with respect to said apparatus frame;

- a control unit ~~for controlling~~configured to control said sledge actuator;

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| said control unit ~~being responsive~~ configured to respond
to said radial displacement detection means to switch off said
sledge actuator when said radial displacement detection means
| ~~indicate~~ indicates that said moving-sledge has come to a
standstill stop.

15. (Currently Amended) Apparatus according to claim 14,
wherein a displacement range of said sledge with respect to said
apparatus frame is restricted by at least one end stop;

 wherein said control unit is designed, in an initializing
phase, to energize said sledge actuator such as to move said sledge
towards said end stop;

| and wherein said control unit ~~switches~~ is configured to
switch off said actuator as soon as said sledge has reached said
end stop.